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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,541	04/30/2001	Jon C.R. Bennett	19282-026	3396
20028	7590	10/20/2004	EXAMINER: LEE, CHI HO A	
LAW OFFICE OF BARRY R LIPSITZ 755 MAIN STREET MONROE, CT 06468			ART UNIT 2663	PAPER NUMBER

DATE MAILED: 10/20/2004


Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/845,541

Applicant(s)

BENNETT, JON C.R. 

Examiner

Andrew Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-18 is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/02/01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 7, it is unclear what is meant by "substantially independent of software instructions". The claimed "controller" is hardware and is inherently controlled by some software instruction.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "hardware" for the controller must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the

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brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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4. Claims 1, 5, 6, 8, 9, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Choudhury et al U.S. Patent Number 6,092,115.

Re Claim 1, fig. 4 teaches the hardware associated with each buffer queue, 30a receives input for packetized data (an input); 99 (a memory) is coupled to 30a for storing the packetized data in queues wherein each queue is associated with a memory allocation b1-bi (associated size) for outputting the packetized data for transmission; 92 (a controller) that controls the transfer of packetized data from 99, where the 92 determines the longest queue among the queues in 99 (the largest range of sizes of queue) (See col. 5, lines 43-62 see fig. 3c); and when the buffer is full any from the highest occupied bin is selected and the packets are discarded (See col. 6, lines 1-9);  
In fig. 3c, step 265, obtains set of queues having  $q > b$  (largest range of sizes of queue) and step 285 selects queues from step 265 for discarding.

Re Claims 5, 9, refer to Claim 1, in fig. 3c, step 285 selects a queue from which to drop packets, in fig. 3c, step 255 obtains memory allocation for each queue to determine queue length (independently of a sized of the selected queue), and step 265 obtains a set of queue having  $q > b$  (relative to sizes of other queue having sizes within same range), afterworth step 285 the selected queues dropped, step 226.

Re Claim 6, refer to Claim 1, 92 is inherently executed by software instruction.

Re Claims 8, 12, refer to Claim 1, fig. 3c teaches step 265 obtains set of queues having  $q > b$  (a particular range of queue sizes that is larger than any

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other range of queue sizes) whereby the control 92 discards packets from the highest occupied queue.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 4, 10, 11, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhury et al U.S. Patent Number 6,092,115.

Re Claims 2, 3, 10, 11, 13, 14 Choudhury teaches, when a connection needs more than bi buffers, it is allocated space from the available pool, provided that the total occupancy is less than B (See col. 4, lines 23-27). Furthermore, Choudhury teaches that the control 92 functions to provide protection from more aggressive traffic sources, misbehaving users (See col. 2, lines 55-62). Choudhury fails to explicitly teach “de-allocating/re-allocating of a portion of memory” to discard packetized data. However, the Control 92 supports per connection queuing by allocating memory space to queue associated with a given source. When a particular source misbehaves, the 92 control can de-allocate/re-allocate memory space to associated queue to enable discarding packets from misbehaving sources. One skilled in the art would have been motivated to control the re-allocation/de-allocation of memory space in queue associated misbehaving sources promote fair queuing among behaving sources.

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Re Claims 4, 15, fig. 3c, step 203 teaches node capacity (determine whether a capacity of the node is exceeded); fig. 3c, steps 255 and 265 determines the current queue length for each queue and obtains set of queues having  $q > b$  (determine...largest range of sizes of queues) wherein step 285 is responsive to the node capacity being exceeded whereby the selected queued packets are dropped.

***Allowable Subject Matter***

7. Claims 16-18 allowed.

The following is a statement of reasons for the indication of allowable subject matter:

As U.S. Patent Number 6,092,115 teaches obtaining a set of queue having the queue length exceeding the allocated capacity for discarding.

As recited in Claim 16, prior art fails to the associating queues in buckets whereby to determine which bucket has the largest associated ranges relative to other buckets and from the determined bucket, selecting a queue for discarding.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 571-272-3130. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3370. The fax

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phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AI

10/14/04

